Amendments to the Specification:

On page 3, after line 2, please insert the following one sentence paragraph:

-- Figure 8 shows a cross-section of a further embodiment. --

Please replace the paragraph beginning on page 3, line 6 with the following amended paragraph:

-- Figure 1 shows a schematic of a preferred embodiment of the invention. A silicon ~~chip 10~~ chip **26** is connected by two pads to loop antenna **12** printed on the tag substrate. Figure 3 shows a layout of the "tag" made by the process of the alternate embodiment. The loop antenna consists of two or more turns of metal pattern **20** ending in two pads **22** across which is mounted a Si chip **26** active side down (i.e., the bonding pads on the chip **26** touch pads **22**). Figure 4 shows a cross section of a preferred embodiment of the invention. Substrate **30** is the mechanical carrier or support. It preferably is not metal as this would raise losses in the reception and transmission of r.f. energy. Typical substrates that are inexpensive are PET film, PEN film, paper, glass epoxy and the like. If PET is used, an anti-static layer can be used to enhance the electrostatic transfer of metal toner to its surface. If paper is used, an adhesion layer **32** is preferably used to fill the pores and fiber cavities of the paper and provide adhesion for the metallic toner particles to the substrate. In either case the adhesion layer preferably includes a resin to promote low temperature processing of the silver toner into a solid metal conductor. A typical and preferred resin is selected from the DOW chemical series of Saran™ resins though other resins have worked well.--

Please replace the paragraph beginning on page 3, line 24 with the following amended paragraph:

-- On top of the anti-stat/adhesion layer **32** , conductor patterns **34** are printed by means of electrostatic printing of metal toners on the anti-stat surface. Typical metal toners include copper, silver, aluminum and gold, with silver being a preferred toner. After drying of the liquid toner hydrocarbon diluent, the metal toner is sintered by heating to a temperature compatible with the upper temperature limit of the substrate. In one embodiment, after drying the toner, the silicon chip **26** is placed on the dried powder silver toner, bonding pads

down onto the silver toner pattern. Now the entire assembly is sintered whereby the silver particles sinter into a solid mass and sinter themselves to the bonding pads of the chip. Thus the metal traces are sintered and the silicon chip is bonded to the pads in a single step. This achieves a significant cost advantage over other production methods.--

Please replace the paragraph beginning on page 4, line 15 with the following amended paragraph:

-- Figure 2 illustrates a tag utilizing the transformer coupling aspect of the invention. In the device of Figure 5 a typical 4 turn antenna **28,** comprising loops of a first layer of metal toner **50** having two end points **54, 56,** is printed on the edges of the "tag". A clear dielectric cross over layer **52** is placed over the section of the tag where the end points **54, 56** are located. This allows for subsequent layer of patterned metal toner **58** to be printed on the cross-over layer without making electrical contact with the underlying toner pattern **50**. The area of the dielectric layer above the end points **54, 56** is either removed or is not placed with the rest of the dielectric layer, to enable an electrical connection to the end points **54, 56**. Now ~~a~~ the second layer of metal toner **58** in the form of one or more loops having end points located directly above, and so connected to, end points **54** and **56** is placed on the dielectric layer thereby completing the circuit and forming a winding for an air core transformer. In summary, the three layers; a first layer of metal toner **50**, dielectric layer **52**, and top metal toner layer **58** make an electrically continuous loop consisting of a large area antenna, ~~**50,**~~ **28** and a transformer winding~~, **58, 26**~~ **24**.--

Please replace the paragraph beginning on page 4, line 33 with the following amended paragraph:

-- Figure 6 shows the 2nd layer of metal toner **58** co-located over a segment of the 1st layer of metal toner **50** to form the coil **24**. To complete the transformer coupling with the silicon chip **26,** the chip **26** contains an output transformer coil ~~**24**~~ **23** , as shown in figure 2, and is mounted directly above the coil ~~50, 28, 58, 26~~ **24** on the substrate. While the location of the chip **26** is not as critical as when mounting and physically and electrically connecting the chip to the metal toner circuit, it is preferred, to increase efficiency of signal/power transfer,

to place the chip as close to the substrate coil 24 as possible, for example, within the locations ~~X-X, 60 and Y-Y 62~~ bounded by the rectangle 61. --

Please replace the paragraph beginning on page 5, line 8 with the following amended paragraph:

-- Figure 7 shows a cross section of a transformer coupling embodiment. Substrate **30** has an antistat/adhesion layer **32** and printed thereon a first metal layer ~~70~~ 50, and a dielectric cross over layer ~~72~~ 52 . A second metal layer ~~74~~ 58 completes the circuit as shown in Figure 5. In a preferred embodiment the first metal layer 50 includes both the antenna 28 loops and an additional transformer 24 loop or portion thereof ~~lop~~. The second metal layer 58 includes one or more transformer **24** loops, which, when connected to the transformer 24 loop, or portion thereof, on the first metal layer **50**, forms a transformer 24 coil have two or more loops. Adhesive layer ~~76~~ 68 is placed on the second metal layer ~~74~~ 58 and bonds chip ~~78~~ 26 in close proximity to the transformer 24 winding ~~58, 26~~. The thickness of the adhesive layer ~~76~~ 68 , typically about 5 microns or less, is small compared to the area (x-x, **60**; and y-y, **62**), of the primary transformer coil which is preferably of the order of about 250x250 microns or more. This assures efficient transfer of energy from the antenna to the chip and from the chip out to the antenna.--

Please replace the paragraph beginning on page 5, line 22 with the following amended paragraph:

-- Encapsultating layer **28,** shown in figure 4, protects the device from the environment and may also have a planarizing effect on the entire structure of the device.

Please replace the paragraph beginning on page 6, line 1 with the following amended paragraph:

--Substrate ~~90~~ 30 with etched metal pattern **92**, has imaged on its electrode pads 94, conductive adhesive dots ~~94~~ 96. Over this die ~~96~~ 26 is accurately placed so that the electrodes on die ~~96~~ 26, not shown, align with pads **94**. Heating to achieve re-flow or setting of adhesive ~~94~~ 96 is applied as necessary.